

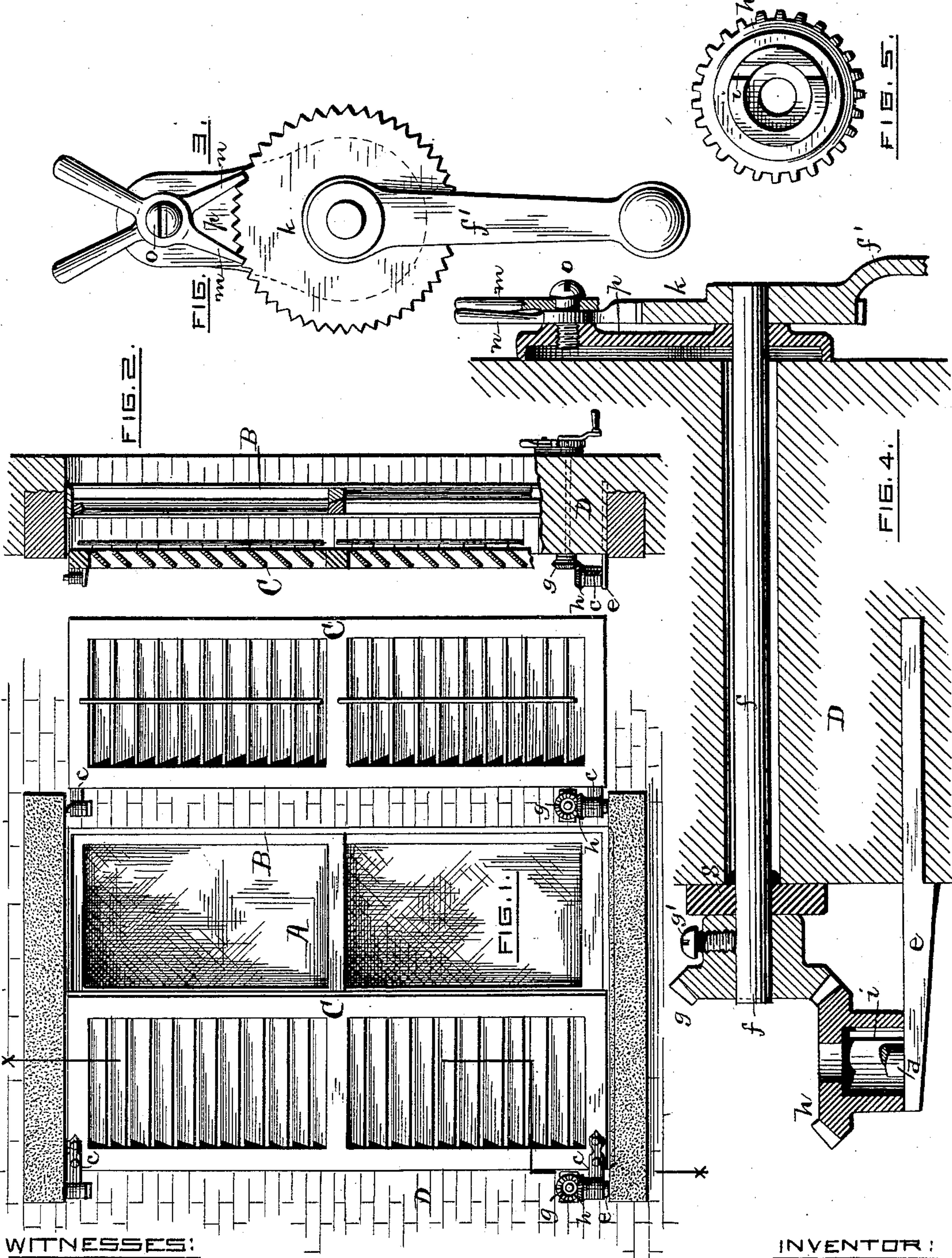
(No Model.)

J. HARGRAVES.

SHUTTER WORKER.

No. 318,109.

Patented May 19, 1885.



WITNESSES:

Chas. F. Cheney
Howard Greene

INVENTOR:

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UNITED STATES PATENT OFFICE

JAMES HARGRAVES, OF PROVIDENCE, RHODE ISLAND.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 318,109, dated May 19, 1885.

Application filed March 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARGRAVES, a citizen of the United States, and a resident of the city and county of Providence, State of Rhode Island, have invented an Improvement in Shutter-Workers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This improvement in that class of shutter-workers wherein the shutter is operated from the interior of a compartment or room has for its object, first, to lock and hold the shutter in open or closed position or at any desired intermediate point, and, secondly, to simplify the construction of parts so as to readily enable the shutter-worker to be fitted to one of the ordinary hinges of a shutter and be quickly adjusted in position to enable the shutter to be operated from the interior of a room.

The invention is further adapted so as to be fitted to a right or left shutter.

The invention consists, primarily, of the combination, with a shaft having a bevel-gear at one end and means at its other end to operate same, and with a blind or shutter provided with a hinge, of a bevel-gear having its hub provided with a central bore and a slot, the said hub fitting over the bent portion of the hinge, or that portion which encircles the pintle of the hinge-staple, while the slot in said hub receives the flat or straight portion of said hinge, so as to cause the bevel-gear to be engaged with or keyed to the hinge, whereby, when the bevel-gear is operated, the shutter, through its hinge, will be moved in unison with said gear. The bevel-gear on the end of the operating-shaft is provided with a set-screw, to permit its easy removal from its shaft and allow the bevel-gear having the slotted hub to be removed from the shutter-hinge.

My invention further consists of the combination, in a shutter-worker, of a shutter-operating shaft provided with means to operate it, and with a ratchet-wheel secured thereto, of a pair of pawls independent of each other, and adapted to engage the ratchet-wheel to prevent rotation of the shaft in either direction and hold the shutter in any desired position.

Figure 1 is an elevation of a window, its

casing, and shutters, with my invention applied; Fig. 2, a section thereof on line *x x*; Fig. 3, a detail showing the pawls and ratchet-wheel; Fig. 4, an enlarged sectional detail to show more clearly the shutter-operating shaft and its connected mechanism, and Fig. 5 a modification to be referred to.

The window A, its casing B, the blinds C, having hinges *c* mounted on the pintles *d* of the hinge-staples *e*, constituting the ordinary window-shutter hinge, may be and are of usual construction. The shutter-operating shaft *f*, extending through the wall D, receives at its inner end a handle, *f'*, to permit its operation, and at its outer end a bevel-gear, *g*, removably secured thereto by means of the set-screw *g'*. This bevel-gear meshes with a second gear, *h*, whose hub has a bore of sufficient diameter to receive the eye or bent portion of the hinge *c*, or that portion which encircles the pintle *d* of the hinge-staple *e*, while the slot *i* in said hub permits the passage therein of the flat or straight part of the hinge, so as to cause the bevel-gear to be locked, or, in effect, keyed to the shutter-hinge *c*, whereby movement of the one induces like movement of the other. It will be noticed, also, that by this means the axis of movement of the shutter on its hinges is also made the axis of movement of the bevel-gear *h* when operated by the bevel-gear *g* and shaft *f*. A ratchet-wheel, *k*, is fixed to the inner end of the shaft *f*, and is engaged by the pawls *m n*, mounted independent of each other on the stud *o*, fixed in the shaft-bearing plate *p*, the purpose of the pawls being, as indicated in the drawings, to engage the ratchet-wheel and prevent movement of the shaft *f* in either direction when required, and thereby lock or retain the shutter in any desired position.

s represents a bearing-block secured to the outer face of the wall D, and adapted to receive and support the outer end of the shaft *f*. The bevel-gear *g*, removably secured to the outer end of the shaft *f*, prevents the removal of the gear *h* from the hinge *c* when the parts are in working order. On the other hand, if it is desired to remove the gear *h* from its hinge, it is only necessary to loosen the set-screw *g'* to release the bevel-gear *g* from its shaft, when said shaft may be wholly or partly

withdrawn from its bearings, whereupon the bevel-gear *h* may be lifted from its hinge.

As shown in Fig. 5, the slot *i* may be extended across the hub of the bevel-gear *h*, so
5 that said gear may be applied to either a right or left shutter hinge.

What I claim is—

In a shutter-worker, the combination, with a shaft having a bevel-gear at one end and
10 means at its other end to operate same, and with a shutter provided with a hinge, of a

bevel-gear having its hub provided with a central bore and slot to fit the hinge, substantially as and for the purpose set forth.

In testimony whereof I have signed my name 15
to this specification in the presence of two subscribing witnesses.

JAMES HARGRAVES.

Witnesses:

CHAS. F. SCHMELZ,
JAS. H. LANGE.